WHAT IS CLAIMED IS:

1. A method of measuring the displacement of the optical axis of an optical microscope having an illumination optical system and a projection optical system, the method comprising:

a step of irradiating the evaluation mark having diffraction grating patterns formed on a substrate with illumination light by way of the illumination optical system and observing the evaluation mark by way of the projection optical system to obtain the brightness of the evaluation mark; and

a step of measuring the displacement of the optical axis on the basis of the relationship between the brightness of the image of the evaluation mark and the direction of the diffraction grating patterns of the evaluation mark.

2. The method of measuring the displacement of the optical axis according to claim 1, wherein

the evaluation mark is composed of at least two gratings connected together and arranged in a series, each having parallel bars that extend in a direction different from those of any other grating.

3. The method of measuring the displacement of the optical axis according to claim 1, wherein

normal light of the illumination light is blocked at the position of the pupil of the projection optical system.

4. The method of measuring the displacement of the optical axis according to claim 2, wherein

diffracted light of the illumination light is blocked at the position of the pupil of the projection optical system.

5. The method of measuring the displacement of the optical axis according to claim 1, wherein

a plurality of beams of diffracted light produced by the diffraction grating patterns are blocked asymmetrically at the position of the pupil of the projection optical system relative to normal light of the illumination light by the substrate.

6. The method of measuring the displacement of the optical axis according to claim 2, wherein

a plurality of beams of diffracted light produced by the diffraction grating patterns are blocked asymmetrically at the position of the pupil of the projection optical system relative to normal light of the illumination light from the substrate.

7. The method of measuring the displacement of the optical axis according to claim 1, wherein

diffracted light is generated by the diffraction grating patterns with asymmetrically differentiated intensity relative to normal light.

8. The method of measuring the displacement of the optical axis according to claim 2, wherein

diffracted light is generated by the diffraction

grating patterns with asymmetrically differentiated intensity relative to normal light.

9. An optical microscope comprising:

an illumination optical system through which illumination light to be applied to an evaluation mark passes;

a projecting optical system through which the illumination light reflected from the evaluation passes; and

a removable and rotatable shield means provided at a pupil of the projection optical system and having a shield area, the shield area is arranged asymmetrically relative to normal light of the illumination light from the substrate.

10. The optical microscope according to claim 9, wherein

the evaluation mark is formed on the substrate.

11. The optical microscope according to claim 9, wherein

the evaluation mark is formed on the stage for carrying the substrate.

12. An evaluation mark comprising:

a substrate; and

diffraction gratings formed on the substrate and adapted to asymmetrically generate diffracted light when irradiated with light.

13. The evaluation mark according to claim 12,

wherein

the diffraction gratings show a saw-blade like cross section.

14. The evaluation mark according to claim 12, wherein

the diffraction gratings show a stepped cross section of a plurality of steps.